

FIGURE 1A

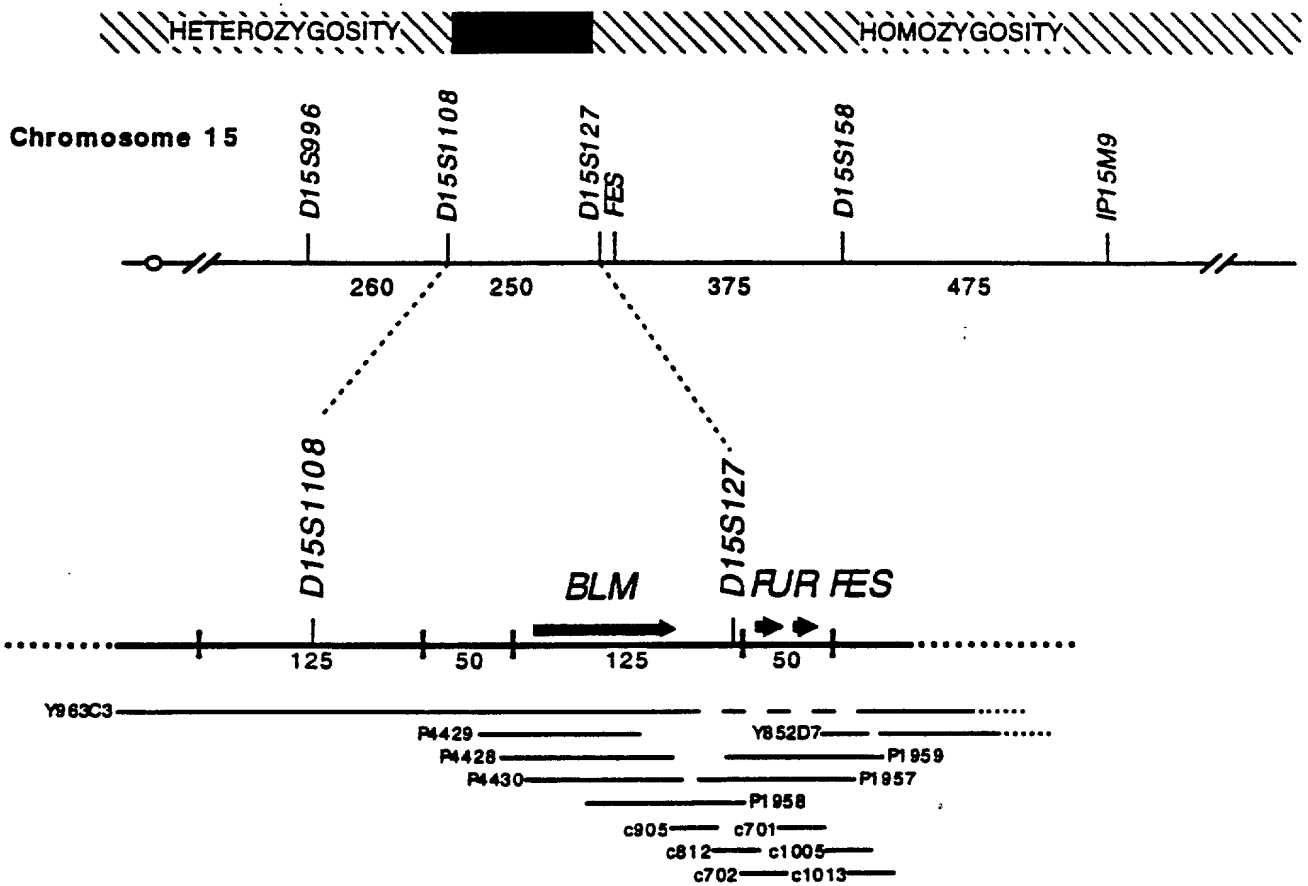


FIGURE 1B

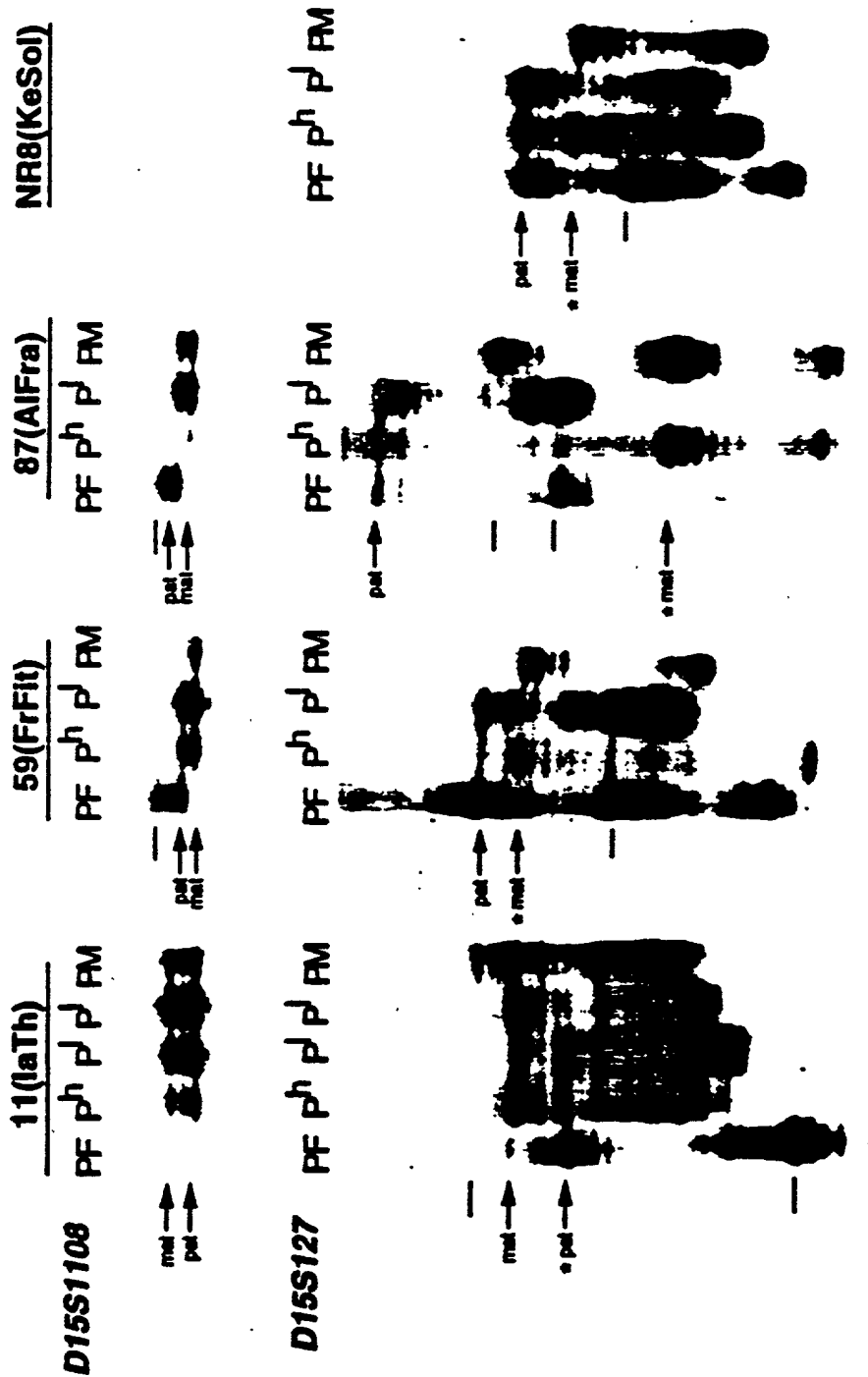


FIGURE 2

gcgcggcgccggtggttgcggcgccgggaagtttggatcctggttccgtccgctaggagtctgctgagaggattATGGCT 80
M A
GCTGTTCTCTCAAAATAATCTACAGGAGCAACTAGAACGTCACTCAGCCAGAACACTTAATAATAAATTAAGTCTTTTCAA 160
3 A V P Q N N L Q E Q L E R H S A R T L N N K L S L S K
ACCAAAATTTTCAGGTTTCACTTTTAAAAAGAAAACATCTTCAGATAACAATGTATCTGTAACTAATGTGTCACTAGCAA 240
30 P K F S G F T F K K T S S D N N V S V T N V S V A
AAACACCTGTATTAAAGAAATAAGATGTAAATGTACCGAAGACTTTTCCTTCAGTGAACCTCTACCCCAACACCACAAAT 320
56 K T P V L R N K D V N V T E D F S F S E P L P N T T N
CAGCAAAGGGTCAAGGACTTCTTTAAAAATGCTCCAGCAGGACAGGAAACACAGAGAGGTGGATCAAAATCATTATTGCC 400
83 Q Q R V K D F F K N A P A G Q E T Q R G G S K S L L P
AGATTCTTTCAGACTCCGAAGGAAGTTGTATGCCTACCCAAACACACCAACTGTAAAGAAATCCCGGATACGTCTC 480
110 D F L Q T P K E V V C T T Q N T P T V K K S R D T A
TCAGAAATTAGAATTTAGTTCCTTACCAGATTCTTTAAGTACCATCAATGATTGGGATGATATGGATGACTTTTGATACT 560
135 L K K L E F S S S P D S L S T I N D W D D M D D F D T
TCTGAGACTTCAAAATCATTGTGTACACCACCCCAAGTCACTTTGTAAAGATAAGCACTGCTCAGAAATCAAAAAGGG 640
163 S E T S K S F V T P P Q S H F V R V S T A Q K S K K G
TAAGAGAACTTTTAAAGCACAGCTTTATACAAACACAGTAAAGACTGATTTCCTCCACCCTCTCTGAAAGCG 720
190 K R N F F K A Q L Y T T N T V K T D L P P P S S E S
AGCAATAGATTTGACTGAGGAACAGAGGATGACTCAGAAATGTTAAGCAGCGATGTGATTTCATCGATGATGGCCCC 800
216 E Q I D L T E E Q K D D S E W L S S D V I C I D D G P
ATTGCTGAAGTGCATATAAATGAAGATGCTCAGGAAAGTCACTCTCTGAAAACCTCATTGGAAGATGAAAGAGATAATAG 880
243 I A E V H I N E D A Q E S D S L K T H L E D E R D N S
CGAAAGCTAGAAGAAATTTGGAAGAAGCTGAATTACATTCAACTGAGAAAGTTCATGTATTGAATTTGATGATGATGATT 960
270 E K K K N L E E A E L H S T E K V P C I E F D D D D
ATGATACGGATTTTGTTCACCTTCTCCAGAAGAAATTTTCTGCTTCTTCTCTCTCAAAATGCCTTAGTACGTGA 1040
296 Y D T D F V P P S P E E I I S A S S S S S K C L S T L
AAGGACCTTGACACATCTGACAGAAAAGAGGATGTTCTTAGCACATCAAAAGATCTTTTGTCAAAACCTGAGAAAATGAG 1120
323 K D L D T S D R K E D V L S T S K D L L S K P E K M S
TATGCAGGAGCTGAATCCAGAACCCAGCAGACTGTGACGCTAGACAGATAAGTTTACAGCAGCAGCTTATTCTATGTGA 1200
350 M Q E L N P E T S T D C D A R Q I S L Q Q Q L I H V
TGGAGCACATCTGTAAATTAATTGATACTATTCTCTGATGATAAACTGAAACTTTTGGATTGTGGGAACGAACTGCTTCAG 1280
376 M E H I C K L I D T I P D D K L K L L D C G N E L L Q
CAGCGGAACATAAGAAGGAACTTCTAACGGAAGTAGATTTTAAATAAAGTAGATCCAGTCTTCTTGGCTCATTGTGCAG 1360
403 Q R N I R R K L L T E V D F N K S D A S L L G S L W R
ATACAGGCCCTGATTCACTTGATGGCCCTATGGAGGGTGATTCCTGCCCTACAGGAATTCTATGAAGGAGTTAAATTTTT 1440
430 Y R P D S L D G P M E G D S C P T G N S M K E L N F
CACACCTTCCCTCAAATTCGTTCCTCTGGGGACTGTTTACTGACTACCACCTAGGAAAGACAGGATTCTCTGCCACC 1520
456 S H L P S N S V S P G D C L L T T T L G K T G F S A T
AGGAAGAATCTTTTGAAGGCCTTTATTCAATACCCATTTCAGAAAGTCTTTGTAAAGTAGCAACTGGGCTGAAACACC 1600
483 R K N L F E R P L F N T H L Q K S F V S S N W A E T P
AAGACTAGGAAAAAAATGAAAGCTCTTATTTCAGGAAATGTTCTCACAGCACTGCTGTGAAAGATCAGAATAAAC 1680
510 R L G K K N E S S Y F P G N V L T S T A V K D Q N K
ATACTGCTTCAATAAATGACTTAGAAGAGAAACCAACCTTCTATGATATTGATAATTTGACATAGATGACTTTGAT 1760
536 H T A S I N D L E R E T Q P S Y D I D N F D I D D F D
GATGATGATGACTGGGAAGACATAATGCATAATTTAGCAGCCAGCAATCTTCCACAGCTGCCTATCAACCCATCAAGGA 1840
563 D D D D W E D I M H N L A A S K S S T A A Y Q P I K E
AGGTCCGCCAATTAATCAGTATCAGAAAGACTTTCTCAGCCAAGACAGACTGTCTCCAGTGTCTACTGCTCAAA 1920
590 G R P I K S V S E R L S S A K T D C L P V S S T A Q
ATATAAACTTCTCAGAGTCAATTCAGAATTATCTGACAAGTCAAGCAGCAAAATTTAGCATCCAGAAATCTGAAACATGAG 2000
616 N I N F S E S I Q N Y T D K S A Q N L A S R N L K H E
CGTTTCCAAAGTCTTAGTTTCTCTCATACAAAGGAAATGATGAAGATTTTTCATAAAAAATTTGGCCTGCATAATTTTAG 2080
643 R F Q S L S F P H T K E M M K I F H K K F G L H N F R
AACTAATCTGCTAGAGCGATCAATGCTGCACTGCTTGGTGAAGACTGTTTATCTGATGCCGACTGGAGGTGGTAAGA 2160
670 T N Q L E A I N A A L L G E D C F I L M P T G G G K
GTTTGTGTTACAGCTCCCTGCCTGTGTTTCTCTGGGGTCACTGTTGTCAATTTCTCCCTTGAGATCACTTATCGTAGAT 2240
696 S L C Y Q L P A C V S P G V T V V I S P L R S L I V D
CAAGTCCAAAAGCTGACTTCTTGGATATTCCAGCTACATTTCTGACAGGTGATAAGACTGACTCAGAAGCTACAAATAT 2320
723 Q V Q K L T S L D I P A T Y L T G D K T D S E A T N I
TTACCTCCAGTTATCAAAAAAGACCCAATCATAAACTTCTATATGTCACTCCAGAAAAGATCTGTGCAAGTAACAGAC 2400
750 Y L Q L S K K D P I I K L L Y V T P E K I C A S N R
TCAITTTCTACTCTGGAGAATCTCTATGAGAGGAAGCTCTTGGCACGTTTGTATTGATGAAGCACATTGTGTCACTCAG 2480
776 L I S T L E N L Y E R K L L A R F V I D E A H C V S Q

FIGURE 2 (cont'd)

TGGGACATGATTTTTCGTCAGATTACAAAAGAATGAATATGCTTCGCCAGAAAGTTTCCTTCTGTTCCTGGGTGATGGCTCT 2560
 803 W G H D F R Q D Y K R M N M L R Q K F P S V P V M A L
 TACGGCCACAGCTAATCCCAGGGTACAGAAGGACCTTCTGACTCAGCTGAAGATTCTCAGACCTCAGGTGTTTAGCATGA 2640
 830 T A T A N P R V Q K D I L T Q L K I L R P Q V F S M
 GCTTTAACAGACATAATCTGAAATACTATGTATTACCGAAAAAGCCTAAAAAGGTGGCATTGTGATTCCTAGATGGATC 2720
 856 S F N R H N L K Y Y V L P K K P K K V A F D C L E W I
 AGAAAGCACCACCATATGATTCAGGGATAATTTACTGCCTCTCCAGGCGAGAATGTGACACCATGGCTGACACGTTACA 2800
 883 R K H H P Y D S G I I Y C L S R R E C D T M A D T L Q
 GAGAGATGGGCTCGCTGCTTCTGCTTACCATGTGCGCTCAGTGATTCTGCCAGAGATGAAGTGCAGCAGAAGTGGATTA 2880
 910 R D G L A A L A L Y H A G L S D S A R D E V Q Q K W I
 ATCAGGATGGCTGTGAGGTATCTGTGCTACAATGTCATTGGGAATGGGGATTGACAAACCGGACGCTGGATTGTGATT 2960
 936 N Q D G C Q V I C A T I A F G M G I D K P D V R F V I
 CATGCATCTCTCCCTAAATCTGTGGAGGGTTACTACCAAGAATCTGCCAGAGCTGGAAGAGATGGGAAATATCTCACTG 3040
 963 H A S L P K S V E G Y Y Q E S G R A G R D G E I S H C
 CCTGCTTTTCTATACCTATCATGATGTGACCAGACTGAAAAGACTTATAATGATGGAAAAAGATGGAACCATCATACAA 3120
 990 L L F Y T Y H D V T R L K R L I M M E K D G N H H T
 GAGAAACTCACTTCAATAATTTGTATAGCATGGTACATTACTGTGAAAATATAACGGAATGCAGGAGAATACAGCTTTTG 3200
 1016 R E T H F N N L Y S M V H Y C E N I T E C R R I Q L L
 GCCTACTTTGGTGAAAATGGATTTAATCCTGATTTTCTGAAGAACACCCAGATGTTTCTTGTGATAATTGCTGTAAAAC 3280
 1043 A Y F G E N G F N P D F C K K H P D V S C D N C C K T
 AAAGGATTATAAAACAAGAGATGTGACTGACGATGTGAAAAGTATTGTAAGATTGTTCAGAACATAGTTCATCACAAG 3360
 1070 K D Y K T R D V T D D V K S I V R F V Q E H S S S Q
 GAATGAGAAATATAAAACATGTAGGCTCTCTGGAAGATTACTATGAATATGCTGGTGCAGATTTTCTTGGGGAGTAAG 3440
 1096 G M R N I K H V G P S C S G R F T M N M L V D I F L G S K
 AGTGCAAAATCCAGTCAGGTATATTTGGAAAAGGATCTGCTTATTCACGACACAATGCCGAAAGACTTTTTTAAAAAGCT 3520
 1123 S A K I Q S G I F G K G S A Y S R H N A E R L F K K L
 GATCTTGACAAGATTTTGGATGAAGACTTATATATCAATGCCAATGACCAGGCGATCGCTTATGTGATGCTCGGAAATA 3600
 1150 T L D K I L D E D L Y I N A N D Q A I A Y V M L G N
 AATCCAAACTGTACTAAATGGCAATTTAAAGGTAGACTTTATGGAAACAGAAAATCCAGCAGTGTGAAAAACAAAAA 3680
 1176 K A Q T V L N G N L K V D F M E T E N S S S S V K K Q K
 GCTTAGTAGCAAAAGTGTCTCAGAGGGAAGAGATGGTTAAAAAATGTCTTGGAGAACTTACAGAAGTCTGCAAATCTCT 3760
 1203 A L V A K V S Q R E E M V K K C L G E L T E V C K S L
 GGGAAAGTTTTGGTGTCCATTACTTCAATATTTTAAATACCGTCACTCTCAAGAAGCTTGCAAGATCTTTATCTTCTG 3840
 1230 G K A V F G V H Y F N I F N T V T L K K L A E S L S S
 ATCCTGAGGTTTTCCTTCAAAATGTATGGTGTACTGAAGACAAACTGGAAAAATATGGTGGGAGTGTATTCAGTATTA 3920
 1256 D P E V L L Q I D G V T E D K L E K Y G A E V I S V L
 CAGAAATACTCTGAATGGACATCGCCAGCTGAAGACAGTTCCCCAGGGATAAGCCTGTCCAGCAGCAGAGGCCCCGGAAG 4000
 1283 Q K Y S E W T S P A E D S S P G I S L S S S S R G P G R
 AAGTGCCGCTGAGGAGCTTGACGAGGAAATACCCGTATCTTCCCACTACTTTGCAAGTAAAAACCAGAAATGAAAGGAAGA 4080
 1310 S A A E E L D E E I P V S S H Y F A S K T R N E R K
 GGAAAAAGATGCCAGCCTCCCAAAGGTCTAAGAGGAGAAAAACTGCTTCCAGTGGTTCCAAGGCAAAGGGGGGGTCTGCC 4160
 1336 R K K M P A S Q R S K R R K T A S S G S K A K G G S A
 ACATGTAGAAAGATATCTTCCAAACGAAATCTCCAGCATCATTTGGATCCAGTTCCAGCTCACATACTTCTCAAGCGAC 4240
 1363 T C R K I S S K T K S S S S I I G S S S S A S H T S Q A T
 ATCAGGAGCCAAATAGCAATTTGGGATTATGGCTCCACCGAAGCCTATAAATAGACCGTTTCTTAAGCCTTCATATGCAT 4320
 1390 S G A N S K L G I M A P P K P I N R P F L K P S Y A
 TCTCATAACAacccgaatctcaatgtacatagaccctctttcttgttgtcagcatctgaccatctgtgacataaagctg 4400
 1416 F S
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FIGURE 3

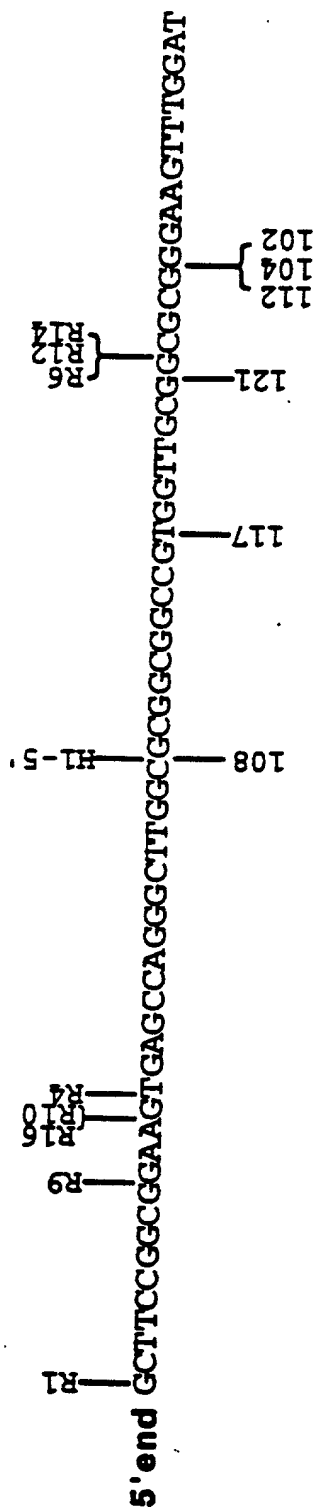


FIGURE 4

I

Ia

649 FEHTKEMMKIFKKGGHNFRTNQLAINDALGEDFTIMPTGGGKSLCYQLPAC-----SPGVIVMSPLRSIVDQV BLM
 74 FPWSGKVKDITLONVEKLEKERRLOLETINVIMAGKEVELVMPITGGGKSLCYQLPALC-----SDGFTLVICPLISLMEDOL REQL
 659 YEWSDEVLYRLHEVEKUPGFRPAQLEAVATLQGDVFEVIMPTGGGKSLCYQLPAVYKSGKTHGTITIVISPLISLMQDQV SGS1
 16 -----VQRTGEGYQOERPGSEEIEDTVBSGRDELIVMPTGGGKSLCYQIPALL-----LNGLTAVVSPITSLMKROV recQ

II

725 QKLTSLDIPATYETGDKDSEATNIYLQLSKEDPIKILYVTPERKICASNRIISTEENLYERKLIARFIDEAHCVSQWG BLM
 150 MVKQQLGISATMLNASSSKEHVKWVHDEMVKNSLEKITYVTPEKIAKSKFMRSLEKAYEARRFTRIAVDEVHCCSQWG REQL
 739 EHLNKNQIKKSMFSSRGTAEQRRQTFNLFIN--GLNDLVYSPEMISASEOCKRAISRLYPDGKLARIIVDEAHCVSNWG SGS1
 83 DOHQANGVAACINSTOTREOQLEVMT--GCRTGQRITTYAPERL-----MDNFTKHE--SHWNPVLLAVDEAHCVISQWG recQ

III

805 HDERQDYKRMNMLEOKFESVEVIALTATANPRVQKILLTOLKILRQOVESMSSENNHNDKYVVPKPKPKVA---EDCLEW BLM
 230 HDFREDYKALGILKROFPNASLEGITATATNHLLTDAQKIECEKCFSTASENRPNL--KYEVRQKPSNTEDFIEDIVKL REQL
 817 HDFREDYKELKFFKREYEDIMIALTATASEQKRMDEIHNLKEKEVFLKQSENRTNL--YVEVNKTKNT---IEEICDA SGS1
 157 HDERREYAKLGQLEQREPTLEFIALTATADDTTEQDIVRLGNDLILQISSEDRPNIRY--MMEKFKPLDQLM----RY recQ

IV

V

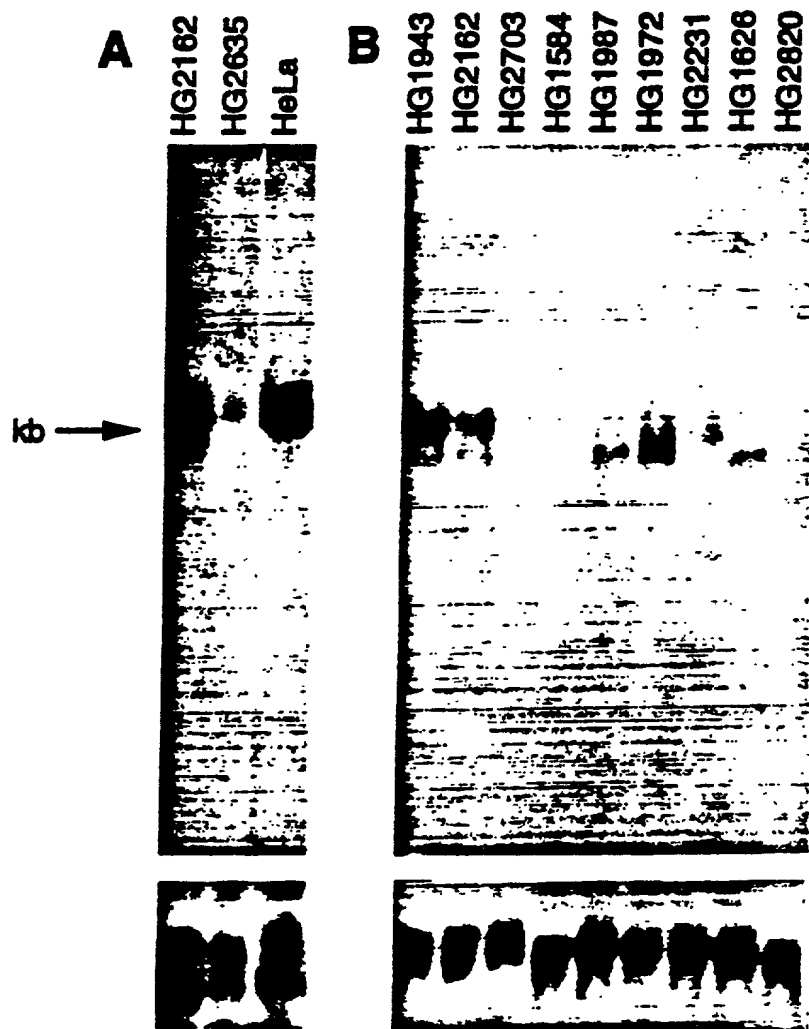
882 BRKHHPYDSGITYCLSRRECOTMADTLQRDGLAALAYHAGLSDSARDEVQOKWINQEGCOVTOATIAFGMGIDKPDVRFV BLM
 309 ENGRYKQSGIYCFQSQKDEQVTVSLQNLGTHAGAYHANLEPEDKTTYHKNISANE--IQVVVATVAFGMGIDKPDVRFV REQL
 893 VKSRFKNQGTGLYCHSKKSCQTSQMQRNQKCAYYHAGMEPDERLSVQKAWQADE--IQVTEATVAFGMGIDKPDVRFV SGS1
 233 VQEQ--RGKSGIYCNSEAKVEDTAAALQSKGESAAAYHAGLENNVRADKQKFRDD--LQIVVATVAFGMGINCPNVRFV recQ

VI

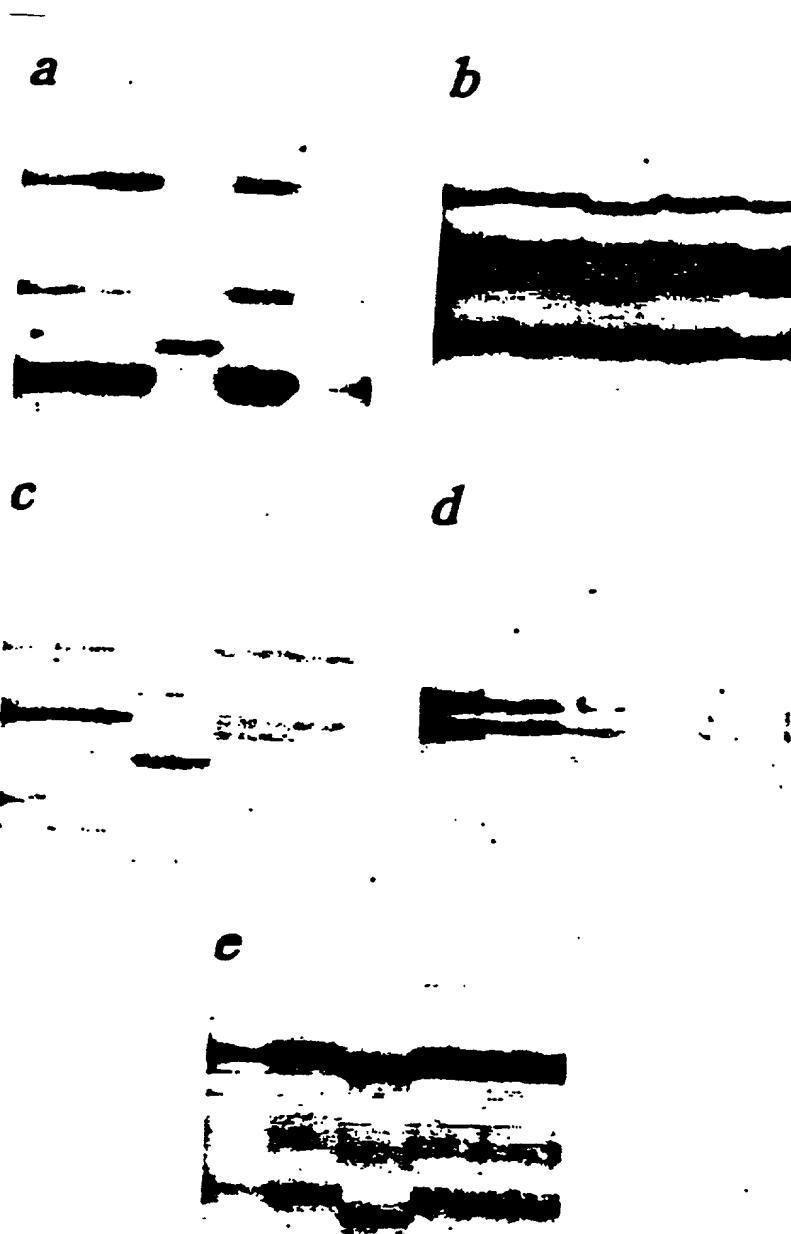
962 IHASLPKSVEGYQESGRAGRDGEIHCLLFYTYHVDVTRLKRLIMMEKDNHHTRETHFNLYSMVHYCENTTECRRIQE BLM
 388 IHHSMSKSMENYYQESGRAGRDMDKADCLLYGEGDIFRISSEVMVENVGQ-----KLYEMVSYQONISKSRRVLM REQL
 972 YHFTVPEETLEGYYQETGRAGRDGNYVCITTEFSERDIRTMTMIQKDQNLDRNKEHLNKLQQVMAYCDNVTDCCRKGV SGS1
 311 VHEDIENIESYQETGRAGRDGLPAEAMGEYDPADMAWRRCLEEKPOSGLODIERH--KINAMGAFAEAQT--CRLVL recQ

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FIGURES 5A and 5B



FIGURES 6A - 6E



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